IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-23 (canceled).

24. (new) Ultrasound welding device comprising:

component parts producing or transmitting oscillations, the device comprising:

a converter comprising a plurality of piezo-ceramic discs which can be placed in oscillation, the plurality of discs being placed between a pin and a nut, and being tensioned by a first bolt element,

a sonotrode,

optionally, a booster placed between the converter and the sonotrode, and

a backing electrode associated with the sonotrode;

a space between the sonotrode and the backing electrode for placing compressible, weldable parts; and

a piezo-ceramic sensor associated with at least one of the component parts, and being constructed and arranged for capturing amplitude of oscillation of the associated component part;

wherein the first bolt element comprises a tapped blind hole starting an end face running from the nut and having an internal threading into which a second bolt is screwed, via which the piezo-ceramic sensor is tensioned with respect to the first bolt element.

25. (new) Ultrasound welding device according to claim 24, wherein the piezo-ceramic sensor comprises at least two piezo-ceramic breaker plates, each of which has an outer diameter AD of 15 mm ≥ AD ≥ 10 mm, and/or an inner diameter ID of 8 mm ≥ ID ≥ 4/mm, and/or a thickness D of 1.5 mm ≥ D ≥ 0.5 mm.

26. (new) Ultrasound welding device according to claim 25, wherein the piezo-ceramic breaker plates comprise electrodes made of baked silver.

27. (new) Converter for an ultrasound welding device, which can be placed into oscillation having an amplitude with a high frequency voltage or a high frequency current,

the converter comprising a plurality of first piezo-ceramic discs which can be place in oscillation and which are placed between a pin and a nut, and which are tensioned between the pin and the nut by a first bolt element,

the first bolt element comprising a tapped blind hole starting at an end face running from the nut, with an internal threading into which a second bolt is screwed, via which a piezo-ceramic sensor capturing the amplitude is tensioned with respect to the first bolt element.

28. (new) Converter according to claim 27, wherein the piezo-ceramic sensor comprises at least two piezo-ceramic breaker plates, each of which has an outer diameter AD of 15 mm ≥ AD ≥ 10 mm, and/or an inner diameter ID of 8 mm ≥ ID ≥ 4/mm, and/or a thickness D of 1.5 mm ≥ D ≥ 0.5 mm.

29. (new) Converter according to claim 28, wherein the piezo-ceramic breaker plates comprise electrodes made of baked silver.

30. (new) A method for measuring and/or regulating the amplitude of a converter for an ultrasonic welding machine which comprises:

component parts producing or transmitting oscillations, the device comprising:

a converter comprising a plurality of piezo-ceramic discs which can be placed in oscillation, the plurality of discs being placed between a pin and a nut, and being tensioned by a first bolt element,

a sonotrode,

optionally, a booster placed between the converter and the sonotrode, and

a backing electrode associated with the sonotrode;

a space between the sonotrode and the backing electrode for placing compressible, weldable parts; and

a piezo-ceramic sensor associated with at least one of the component parts, and being constructed and arranged for capturing amplitude of oscillation of the associated component part;

wherein the first bolt element comprises a tapped blind hole starting an end face running from the nut and having an internal threading into which a second bolt is screwed, via which the piezo-ceramic sensor is tensioned with respect to the first bolt element;

a control circuit connected to the converter for sending thereto a high frequency voltage or current to produce ultrasound oscillations;

comprising the steps of:

comparing actual signals corresponding to oscillation amplitudes determined by the piezo-ceramic sensor with expected signals in the control circuit or a measuring and monitoring device, and

varying an output signal of the control circuit as a function of deviations between the actual and expected signals, by means of which output signal the oscillations are produced.

31. (new) A method according to claim 30, wherein alternating signals generated by the sensor by means of oscillation amplitudes, and/or direct voltage signals derived from the alternating signals are sent to the control system circuit or the measuring and monitoring device to regulate at least one output signal.

32. (new) A method according to claim 30, wherein the

sensor signals are fed to a differential amplifier with a comparator, with a high frequency voltage present in the converter or the piezo-ceramic discs or a flowing high frequency current, and an output signal of the comparator forms the basis for regulating the high frequency voltage or the high frequency current.

33. (new) A method according to claim 30, wherein the sensor signals are sent to a rectifier circuit and a compensation voltage signal of the rectifier circuit forms the basis for regulating the high frequency voltage or the high frequency current.

34. (new) A method according to claim 30, wherein the sensor signals are sent to a comparator and are transformed into voltage signals with an oscillation frequency of the signals and sent to a counter.